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Sequence Listing could not be accepted.

If you need help call the Patent Electronic Business Center at (866) 217-9197 (toll free).

Reviewer: Keisha Douglas

Timestamp: [year=2008; month=10; day=22; hr=13; min=58; sec=59; ms=24;]

=====

Reviewer Comments:

<220>

<221> modified_base

<222> 4

<223> N = tetrafluoroindole

<400> 15

ctgntagcct ctggatttga

20

The above "N" response for sequence id# 15 is invalid. FYI, "N" can only represent a single nucleotide. Please correct the remaining sequences showing similar errors.

Application No: 10592919 Version No: 3.0

Input Set:

Output Set:

Started: 2008-09-22 14:39:31.674
Finished: 2008-09-22 14:39:32.993
Elapsed: 0 hr(s) 0 min(s) 1 sec(s) 319 ms
Total Warnings: 47
Total Errors: 0
No. of SeqIDs Defined: 48
Actual SeqID Count: 48

| Error code | Error Description |
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| W 213 | Artificial or Unknown found in <213> in SEQ ID (1) |
| W 213 | Artificial or Unknown found in <213> in SEQ ID (2) |
| W 213 | Artificial or Unknown found in <213> in SEQ ID (3) |
| W 213 | Artificial or Unknown found in <213> in SEQ ID (5) |
| W 213 | Artificial or Unknown found in <213> in SEQ ID (6) |
| W 213 | Artificial or Unknown found in <213> in SEQ ID (7) |
| W 213 | Artificial or Unknown found in <213> in SEQ ID (8) |
| W 251 | Found intentionally skipped sequence in SEQID (9) |
| W 213 | Artificial or Unknown found in <213> in SEQ ID (10) |
| W 213 | Artificial or Unknown found in <213> in SEQ ID (11) |
| W 213 | Artificial or Unknown found in <213> in SEQ ID (12) |
| W 213 | Artificial or Unknown found in <213> in SEQ ID (13) |
| W 213 | Artificial or Unknown found in <213> in SEQ ID (14) |
| W 213 | Artificial or Unknown found in <213> in SEQ ID (15) |
| W 213 | Artificial or Unknown found in <213> in SEQ ID (16) |
| W 213 | Artificial or Unknown found in <213> in SEQ ID (17) |
| W 213 | Artificial or Unknown found in <213> in SEQ ID (18) |
| W 213 | Artificial or Unknown found in <213> in SEQ ID (19) |
| W 213 | Artificial or Unknown found in <213> in SEQ ID (20) |
| W 213 | Artificial or Unknown found in <213> in SEQ ID (21) |

Input Set:

Output Set:

Started: 2008-09-22 14:39:31.674
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Total Warnings: 47
Total Errors: 0
No. of SeqIDs Defined: 48
Actual SeqID Count: 48

| Error code | Error Description |
|------------|--|
| W 213 | Artificial or Unknown found in <213> in SEQ ID (22) This error has occurred more than 20 times, will not be displayed |

SEQUENCE LISTING

<110> Michael, T. Migawa
Walter F. Lima
Eric E. Swayze
Joshua Nichols
Hongjiang Wu
Thazha P. Prakash
Tadeusz Krzysztof Wyrzykiewicz
Balkrishen Bhat
Stanley T. Crooke

<120> COMPOSITIONS AND METHODS FOR OPTIMIZING
CLEAVAGE OF RNA BY RNASE H

<130> CORE0037USA

<140> 10592919
<141> 2008-09-22

<150> PCT/US2005/008428
<151> 2005-03-15

<150> 60/609,516
<151> 2004-09-13

<150> 60/567,016
<151> 2004-04-29

<150> 60/553,646
<151> 2004-03-15

<160> 48

<170> FastSEQ for Windows Version 4.0

<210> 1
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<213> Artificial Sequence

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<400> 1
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<210> 2
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
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<400> 2
agttaggtc tccgatcgac

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<210> 3
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide

<400> 3
ctgctagcct ctggatttga

20

<210> 4
<211> 2160
<212> DNA
<213> Mus musculus

<400> 4
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agtatagagc gtgcagataa tgacaaggag tatcttgcgtt tcaccctaaac aaaaaacgat 1920
cttgacaaag ccaacaaaga caaggccaaac cgataacttct ctccaaattt taaggtgaaa 1980
ctataacttta caaaaacagt agaggagcca tcaaatacgt aggttagcag ttcaacttct 2040
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<210> 5
<211> 24
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<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide

<400> 5
atgacaatca tgttgcagca attc 24

<210> 6
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide

<400> 6
cgatgcaata aatatgcaca aatca 25

<210> 7
<211> 28
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide

<400> 7
ctgtaaaagct ggaaaggac ggactggt 28

<210> 8
<211> 20
<212> DNA
<213> Artificial Sequence

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<400> 8
cctccctga aggttcctcc 20

<210> 9

<400> 9
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<210> 10
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<212> RNA
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<223> Synthetic oligonucleotide

<400> 10
cgcgaaauucg cg 12

<210> 11
<211> 12
<212> RNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide

<400> 11
gccccuuaagc gc 12

<210> 12
<211> 19
<212> RNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide

<400> 12
cgagaggcgg acgggaccg 19

<210> 13
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide

<220>
<221> misc_feature
<222> 1-19
<223> Bases at these positions are RNA

<400> 13
cgagaggcgg acgggaccgt t 21

<210> 14
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide

<220>
<221> misc_feature
<222> 1, 2, 3, 5, 6, 7, 8, 10, 11, 12, 13, 14,
16, 18, 19
<223> Bases at these positions are RNA

<400> 14

cgggtccccgtc cgcctctcggt t

21

<210> 15

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide

<220>

<221> modified_base

<222> 4

<223> N = tetrafluoroindole

<400> 15

ctgntagcct ctggatttga

20

<210> 16

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide

<220>

<221> modified_base

<222> 5

<223> N = tetrafluoroindole

<400> 16

ctgcnagcct ctggatttga

20

<210> 17

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide

<220>

<221> modified_base

<222> 6

<223> N = tetrafluoroindole

<400> 17

ctgctngcct ctggatttga

20

<210> 18

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide

<220>
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<222> 7
<223> N = tetrafluoroindole

<400> 18
ctgctancct ctggatttga 20

<210> 19
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
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<220>
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<222> 8
<223> N = tetrafluoroindole

<400> 19
ctgctagnct ctggatttga 20

<210> 20
<211> 20
<212> DNA
<213> Artificial Sequence

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<223> N = tetrafluoroindole

<400> 20
ctgctagccn ctggatttga 20

<210> 21
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
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<220>
<221> modified_base
<222> 5
<223> N = N-3-methyl-2'MOE-thymidine

<400> 21
ctgcnagcct ctggatttga 20

<210> 22
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
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<220>
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<222> 17
<223> N = tetrafluoroindole

<400> 22
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<210> 23
<211> 20
<212> DNA
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<220>
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<222> 16
<223> N = tetrafluoroindole

<400> 23
ctgctagcct ctgganttga 20

<210> 24
<211> 20
<212> DNA
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<220>
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<220>
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<222> 15
<223> N = tetrafluoroindole

<400> 24
ctgctagcct ctggntttga 20

<210> 25
<211> 20
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<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide

<220>

<221> modified_base
<222> 14
<223> N = tetrafluoroindole

<400> 25
ctgctagcct ctgnatttga 20

<210> 26
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
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<220>
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<222> 13
<223> N = tetrafluoroindole

<400> 26
ctgctagcct ctngatttga 20

<210> 27
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
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<220>
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<222> 5, 15
<223> N = tetrafluoroindole

<400> 27
ctgcnagcct ctggntttga 20

<210> 28
<211> 20
<212> DNA
<213> Artificial Sequence

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<220>
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<222> 16
<223> N = N-3-methyl-2'MOE-thymidine

<400> 28
ctgctagcct ctgganttga 20

<210> 29
<211> 20

<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide

<220>
<221> modified_base
<222> 7
<223> N = 2'-ara-fluorothymidine or pseudouridine or
2'-fluorothymidine or 2-thiouridine or
2'-S-methylthymidine or 4'-methylthymidine or
3'-methylthymidine

<400> 29
ctacgcnttc cacgcacagt 20

<210> 30
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<221> modified_base
<222> 8
<223> 2'-ara-fluorothymidine or pseudouridine or
2'-fluorothymidine or 2-thiouridine or
2'-S-methylthymidine or 4'-methylthymidine or
3'-methylthymidine

<400> 30
ctacgctntc cacgcacagt 20

<210> 31
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<221> modified_base
<222> 9
<223> 2'-ara-fluorothymidine or pseudouridine or
2'-fluorothymidine or 2-thiouridine or
2'-S-methylthymidine or 4'-methylthymidine or
3'-methylthymidine or abasic nucleotide or 2,4-F-tolyl

<400> 31
ctacgcttnc cacgcacagt 20

<210> 32
<211> 20

<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide

<220>
<221> modified_base
<222> 10
<223> 2'-ara-fluorocytidine or abasic nucleotide or
2,4-F-tolyl

<400> 32
ctacgctttn cacgcacagt 20

<210> 33
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide

<220>
<221> modified_base
<222> 11
<223> abasic nucleotide or 2,4-F-tolyl

<400> 33
ctacgcttcc nacgcacagt 20

<210> 34
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide

<220>
<221> modified_base
<222> 12
<223> adenine with propyl linker or adenine with butyl
linker or adenine with pentyl linker or
tetrahydrofuran or 4-Me-ben

<400> 34
ctacgcttcc cnccgcacagt 20

<210> 35
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide

<220>
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<222> 13
<223> 2'-ara-fluorocytidine

<400> 35
ctacgcttc cangcacagt 20

<210> 36
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
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<220>
<221> modified_base
<222> 14
<223> guanine with propyl linker or tetrahydrofuran or
gancyclovir

<400> 36
ctacgcttc cacnacacagt 20

<210> 37
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide

<220>
<221> modified_base
<222> 15
<223> 2'-ara-fluorocytidine or cytidine with propyl
linker or cytidine with butyl linker or cytidine
with pentyl linker

<400> 37
ctacgcttc cacgnacagt 20

<210> 38
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
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<220>
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<222> 4
<223> N= Tetraflouroindole

<400> 38

agtntaggc tccgatcg 20

<210> 39
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
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<220>
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<222> 5
<223> N= Tetraflouroindole or N=
2,3,4,5-tetraflourophenyl

<400> 39
agttnaggc tccgatcg 20

<210> 40
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide

<220>
<221> modified_base
<222> 6
<223> N= Tetraflouroindole or N=
2,3,4,5-tetraflourophenyl

<400> 40
agttnnggc tccgatcg 20

<210> 41
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
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<220>
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<222> 7
<223> N= Tetraflouroindole

<400> 41
agttnangc tccgatcg 20

<210> 42
<211> 20
<212> DNA
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<220>
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<222> 8
<223> N= Tetraflouroindole

<400> 42
agttagtgc tccgatcg 20
tc

<210> 43
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<220>
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<220>
<221> modified_base
<222> 13
<223> N= Tetraflouroindole

<400> 43
agttaggtc tcngatcg 20
tc

<210> 44
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<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide

<220>
<221> modified_base
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<223> N= Tetraflouroindole

<400> 44
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tc

<210> 45
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<220>
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<223> N= Tetraflouroindole

<400> 45

agtttaggtc tccgntcgtc

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<210> 46

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide

<220>

<221> modified_base

<222> 16

<223> N= Tetraflouroindole

<400> 46

agtttaggtc tccgancgtc

20

<210> 47

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide

<220>

<221> modified_base

<222> 17

<223> N= Tetraflouroindole

<400> 47

agtttaggtc tccgatngtc

20

<210> 48

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide

<220>

<221> modified_base

<222> 6, 16

<223> N= Tetraflouroindole

<400> 48

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20